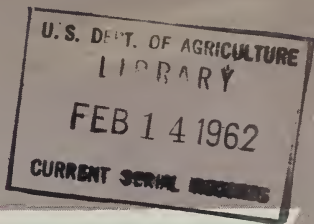


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463



CONSERVATION ON FARM WOODLANDS



PA 463

Soil Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

August 1961

Well-stocked farm woodland
that will produce annual wood
crops.



MD-10077

CONSERVATION ON FARM WOODLANDS

by T. B. Plair, head woodland conservationist, Soil Conservation Service

Farmers and ranchers own more than a third of the commercial woodland in the United States and nearly half of the privately owned commercial woodland.

Most of this commercial woodland on farms is in small fields—fields no larger than 40 acres.

About 95 percent of all farm woodland in the United States is in soil conservation districts.

Annual farm income from wood crops is about one-third of the potential income. Farmers as a whole can probably triple the returns from their woodland by (1) thinking of wood as a farm crop and growing it as a farm job and (2) applying conservation practices in the woods that are keyed to a coordinated soil and water conservation system for the entire farm.

Conservation on woodland is therefore important

to farmers who now have fields where trees are growing or who have cleared fields that are more suited to growing trees than to raising cultivated crops or producing hay or pasture. As woodland they can provide crops of wood and wildlife, conservation of water and soil, and many other satisfactions that go along with having a good woods.

For most farmers, the wood crop will probably be the most important. But the hunting, the enjoyment of wildlife, and the other pleasures can all be had for little or no additional cost.

Every farmer is anxious to get the best return possible from each phase of his conservation plan. He needs to decide how he can best use his soil, his labor, and his equipment in growing wood crops just as he does for growing any other crop.

GROWING WOOD CROPS IS A FARM JOB

Growing wood crops on the farm is a farm job. It is not a separate activity. It is an integral part of your farm business. And, since you can do your woodland work at any time, you can make more efficient year-round use of your labor and equipment.

Growing wood crops is basically the same as growing any other farm crop. It involves an understanding of soil capability for woodland planting, care and improvement of the trees, and harvesting and marketing of the wood crop. Trees are plants.

The growth of a tree and of a cornstalk or a cotton plant are similar. Trees respond to soil management and cultural practices just as other plants do.

Technical assistance in relating soils information to growing your wood crop or to other specialized aspects of growing wood as a crop is available from both public and private sources—from private professional foresters, from forest industries, and from county, State, or Federal forestry and conservation agencies.

WOODLANDS IN THE CONSERVATION FARM PLAN

For maximum soil and water conservation and permanent productivity, each acre of your farm should be (1) fitted into a conservation plan for the entire farm, (2) used within its capability, and (3) treated according to its conservation needs. Each acre should contribute to your income.



Power saw speeds harvesting.

DEL-10283

A soil and land-capability map, prepared for each soil conservation district cooperators by the Soil Conservation Service (SCS), is the basis for the conservation farm plan. The map shows the safe use of each piece of land. Some pieces of land can safely be cultivated regularly; others only occasionally. Some are not suitable for cultivation but can safely be used for grassland or for woodland. Still other land not suitable for cultivation, grassland, or woodland can be used for other purposes. Some of it is good land for wildlife, some is valuable for watershed protection, and some of it is good for recreation.

A piece of land can be used *below* its capability, but it cannot be used safely *above* its capability. For example, most land suitable for cultivation can be used for woodland, grassland, or for wildlife.

As a soil conservation district cooperators, you can use the capability map of your farm to help you make your own decisions on how to use your land, what conservation measures to apply, and when to apply them to decide what fields to use for cultivation, grassland, and woodland.

When you decide what land to use for wood crops, the SCS technician will help you develop a plan for the entire farm.

Soil and Moisture

Trees will grow on most kinds of soil in regions having long growing seasons and enough rainfall. But their rate of growth is greatly affected by the

kind of soil even where climatic conditions are favorable.

The kind of soil you have may determine what kinds of trees you can grow. It may also determine the conservation practices you need to adopt. For example, some soils compact more readily or retain less moisture than other soils. Some soils erode more readily or have a higher rate of runoff than other soils. Compaction, erosion, and excessive runoff reduce the rate of tree growth on most soils.

On soils that compact readily, you should prevent trampling by livestock and avoid using heavy equipment during wet periods. On soils that erode readily, you should provide protection against direct exposure to rain or wind.

Income from Wood Crops

Wood crops require less labor per acre than many other crops. Therefore, they will produce a higher labor income per acre. The risk of a crop loss is low. For example, in most States effective protection programs have kept the yearly fire loss to less than one-half of 1 percent of the total area of woods.

Other economic considerations:

The cost-sharing provisions of the Agricultural Conservation Program apply to several woodland conservation practices.

The Internal Revenue Law permits certain expenditures for woodland conservation practices to be deducted from income taxes.

Income from wood crops is reportable as long-term capital gains in income tax returns.

The Federal Reserve Act permits national banks to consider woodlands as improved land for real-estate loans.

Real-estate tax exemptions apply to growers of wood crops in many States.

Woodland-work normally is nonseasonal; wood crops can be harvested when the market is up.

Future Demand for Wood Crops

New uses for wood crops are being developed continually such as hardboard, particleboard, and pressboard. Demands for plywood and pulpwood are increasing steadily. More wood crops are being grown for industry by private landowners each year.

ESTABLISHING NEW WOOD CROPS

To establish new wood crops, plant seedlings in open fields or interplant them in wooded areas after determining that the soil is suitable for growing the kind of wood crops you want.

You can get instructions for tree planting from your soil conservation district; from county, State, or Federal forestry and conservation agencies; or from forest industries.

Open-Field Planting

Plant the kind of trees that are adapted to the soil and climate of your community. Conifers will often grow in soils that are unsuitable for hardwoods; for example, where the soil has less moisture than that required by hardwoods.

Use tree-planting machines where possible, especially in fairly large areas.

Interplanting in Wooded Areas

Interplant desirable species in wooded areas not fully stocked, or on land occupied by poor species, if natural reproduction is too slow in getting started, or if seed trees of good species are scarce.

Plant in open spaces in the woods where light reaches the ground. In areas where you cannot use tree planters, use any handtools, such as grub hoe, mattock, tile spade, shovel, or specially designed planting bars.

Protective Plantings

Field Windbreaks

Plant windbreaks to protect fields from damaging winds. Field windbreaks control soil blowing and

protect crops from blowdown, firing by hot winds, loss of soil moisture, and damage from frost and sleet. They serve as snow fences in winter and help build a soil-moisture reserve by holding snow on fields.

Farmstead Windbreaks

Plant windbreaks around farmsteads to protect the buildings, garden, and livestock from winds. Farmstead windbreaks reduce home heating costs and livestock feed bills. They increase the quality and quantity of garden crops. Animals protected by windbreaks gain more weight than unprotected animals. Some farmers and ranchers prefer windbreaks to enclosed livestock shelters.

Planting in Critical Areas

"Critical areas" include gullies, sand dunes, streambanks, and other raw areas. Planting in such areas often includes special site preparation, mechanical structures, and maintenance.

In gullies, plant trees to control erosion, stabilize soil, and provide desilting areas or basins. In sand dunes, plant trees to prevent shifting and blowing.

Along streambanks, plant trees to prevent bank undercutting, control streamflow, and reduce the sediment load. In other silt-source areas, plant trees to control erosion, protect adjacent areas, and reduce reservoir siltation.

Watershed Protection

For watershed protection, plant trees to provide cover for soil protection, improve the absorption rate and the water-holding capacity of the soil, and improve the quality of water produced in the watershed, and to contribute to flood prevention.

CONSERVATION IN EXISTING WOODLANDS

By fitting woodland into your farming operation and using woodland conservation measures, you can increase the production of your wood crops, improve their quality.

Growing More Wood Crops

You can speed up natural establishment of young trees by preparing a seedbed, leaving enough seed trees when harvesting, cutting small openings in dense stands, and "releasing" the desirable species. Dragging logs through the woods when harvesting, removing competing vegetation, and disking and harrowing are methods of preparing a seedbed. Cutting out the overstory, deadening "wolf" trees, and using chemicals on small undesirable trees and sprout growth are methods of "releasing" the desirable species.

Growing Better Wood Crops

Quality wood crops bring the highest price. Improvement cutting and pruning improve the quality.

By removing your poorest trees for fuel, posts, and poles you improve your stand. This leaves, for later harvest, trees of the most desirable species and those having the best form, vigor, and spacing.



Woodland work can be done at any time.

NJ-10400



Farm woodland after thinning.

OH-20464

Mobile sawmill operating on the farm.

79083



This gives your future crop trees enough horizontal and vertical space so that they get the full benefit of sunlight, air, and soil moisture.

Pruning is cutting off limbs on the trunk of a tree so that the wood formed later will be free of knots. First-grade logs to be sawed into lumber or cut into veneer are often worth about 4 times the value of second-grade logs and 6 to 20 times the value of lowest grade logs.

Growing Wood Crops Faster

To grow wood crops faster, use the site most suitable for the species selected, thin the trees to give the best ones growing room and pick the fastest growing species when planting.

When thinning young stands leave enough trees to use the soil efficiently and still give the trees enough room to grow at a good rate for a few years—until the stand is ready for another thinning or for a harvest cut.

Protecting Wood Crops

Protection from Fire

Protecting wood crops from fire is not difficult on most farms and ranches, particularly where woodlands are separated or surrounded by cultivated fields or grassland. The essentials are farm fire-prevention measures and quick action to stop fires that start.

Organized fire protection is available to woodland owners in most regions. In many States, the State Forester maintains a fire-protection system. In some States, owners organize fire districts and pay part of the cost of protection.

Fire-prevention measures that you as a woodland owner should consider are fire lanes and trash disposal, which should be done in accordance with local recommendations. Some fire lanes are kept in grass and mowed periodically. Some are plowed and disked often enough to keep down vegetation.

Protection from Grazing

Protection from livestock is essential to woodland conservation. In hardwoods usually this means excluding animals by fencing them into improved pastures. Livestock get little nourishment from the forage found in hardwood stands, and they can do great damage by browsing and trampling. They often browse on seedlings of the better species of trees in preference to other forage.

In some pine woodlands grazing is consistent with growing wood crops, provided the number of animals is adjusted to the amount of forage and the season. The young pine trees are seldom eaten as long as palatable grasses are available.

Protection from Insects and Diseases

Healthy, rapidly growing trees are less likely to be damaged by insects and diseases than slow-growing, mature trees. If your stand is one of mixed species you are less apt to suffer total losses than if you have only pure stands. Some diseases and some insect attacks require community control measures. Removal of infested trees may be the best control. The careful grower checks his woodland frequently for evidence of damage by insects or diseases.

Poles, posts, and pulpwood harvested in improvement cutting.

GA-260





NEB-1194

Tractor-drawn tree planter.



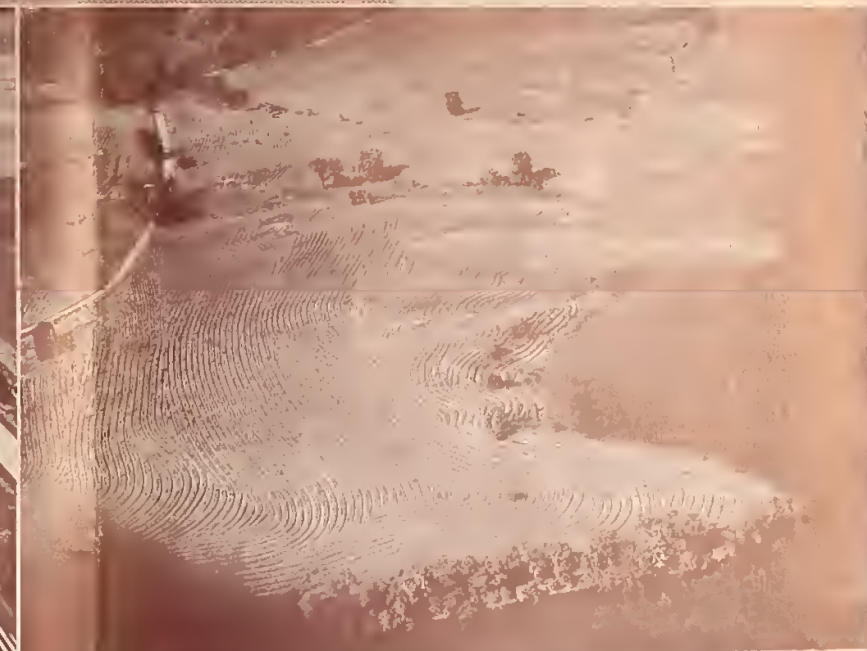
MICH-20164

Red and white pine interplanting 10 years old.



NEB-1534

Windbreaks protect fields and farmsteads.



80739

Contour ridges ready for planting to conifers for watershed protection.

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CONSERVATION ASSISTANCE ON WOODLANDS

Following are some of the conservation services a district cooperators may get through his soil conservation district:

1. Help of Soil Conservation Service technicians assigned to the district in preparing and carrying out a coordinated conservation farm plan that includes the farm woodland.
2. In many districts, help of State, county, and private foresters who may give assistance in education, management, marketing, fire protection, and disease and insect control.
3. In some districts, trained tree-planting crews.
4. In most districts, tree-planting machines and other specialized equipment.
5. Low-cost seedlings from State, soil conservation district, or private nurseries in most States.
6. In some districts, cooperative marketing and sawmilling operations.